

In the Claims:

Please cancel claims 4 and 15, without prejudice, amend claims 1, 10 and 12, and add new claims 21-22 as follows:

1. (Currently amended) A tracking control method comprising the steps of:

(a) measuring an optimum offset by measuring a light beam irradiation state of a light beam while offsetting a tracking target position of the light beam on a recording medium so that an optimum light beam irradiation state is obtained at the tracking target position; and

(b) carrying out a tracking control by setting the optimum offset measured by said step (a),

wherein said step (a) is carried out in a state where a waveform interference from an adjacent track that is adjacent to a track at the tracking target position is easily generated.

2. (Original) The tracking control method as claimed in claim 1, further comprising the step of:

(c) judging a type of the recording medium,

said step (a) being carried out when said step (c) judges that the recording medium is a high-density recording medium.

3. (Original) The tracking control method as claimed in claim 1, wherein said step (a) detects the light beam irradiation state based on one parameter selected from a group consisting of a read error, a reproduced signal amplitude and an amount of focus control.

4. (Cancelled)

5. (Original) The tracking control method as claimed in claim 1, wherein said step (a) is carried out for every predetermined radial position on the recording medium and/or for every one revolution angle of the recording medium.

6. (Original) The tracking control method as claimed in claim 1, wherein said step (a) is carried out when a difference between previous and present measurement execution times is greater than or equal to a prescribed time and/or when a temperature difference between previous and present measurements is greater than or equal to a prescribed temperature.

7. (Original) The tracking control method as claimed in claim 1, further comprising:

(c) carrying out a reproducing process again by changing the optimum offset of the tracking target position in a positive or negative direction, when an error is generated during a reproducing process with respect to the recording medium.

8. (Original) The tracking control method as claimed in claim 7, wherein said step (c) changes the optimum offset of the tracking target position in the positive or negative direction depending on a success rate of the reproducing process which is carried out again.

9. (Original) The tracking control method as claimed in claim 1, further comprising the step of:

(c) setting an optimum offset depending on at least one of an object of a seek process and a target address on the recording medium.

10. (Currently amended) A storage apparatus comprising:

offset measurement control means for measuring an optimum offset by measuring a light beam irradiation state of a light beam while offsetting a tracking target position of the light beam on a recording medium so that an optimum light beam irradiation state is obtained at the tracking target position; and

tracking control means for carrying out a tracking control by setting the optimum offset which is updated,

wherein said offset measurement control means measures the optimum offset in a state where a waveform interference from an adjacent track that is adjacent to a track at the tracking target position is easily generated.

11. (Original) The storage apparatus as claimed in claim 10, further comprising:

judging means for judging a type of the recording medium,

said offset measurement control means measuring the optimum offset when said step judging means judges that the recording medium is a high-density recording medium.

12. (Currently amended) A storage apparatus comprising:

a measuring section which measures an optimum offset by measuring a light beam irradiation state of a light beam while offsetting a tracking target position of the light beam on a recording medium so that an optimum light beam irradiation state is obtained at the tracking target position; and

a control section which carries out a tracking control by setting the optimum offset measured by said measuring ~~means~~section,

wherein said measuring section measures the optimum offset in a state where a waveform interference from an adjacent track that is adjacent to a track at the tracking target position is easily generated.

13. (Original) The storage apparatus as claimed in claim 12, further comprising:

judging section which judges a type of the recording medium,

said measuring section measuring the optimum offset when said judging section judges that the recording medium is a high-density recording medium.

14. (Original) The storage apparatus as claimed in claim 12, wherein said measuring section detects the light beam irradiation state based on one parameter selected from a group consisting of a read error, a reproduced signal amplitude and an amount of focus control.

15. (Cancelled)

16. (Original) The storage apparatus as claimed in claim 12, wherein said measuring section measures the optimum offset for every predetermined radial position on the recording medium and/or for every one revolution angle of the recording medium.

17. (Original) The storage apparatus as claimed in claim 12, wherein said measuring section measures the optimum offset when a difference between previous and present measurement execution times is greater than or equal to a prescribed time and/or

when a temperature difference between previous and present measurements is greater than or equal to a prescribed temperature.

18. (Original) The storage apparatus as claimed in claim 12, further comprising:

a reproducing section which carries out a reproducing process again by changing the optimum offset of the tracking target position in a positive or negative direction, when an error is generated during a reproducing process with respect to the recording medium.

19. (Original) The storage apparatus as claimed in claim 18, wherein said reproducing section changes the optimum offset of the tracking target position in the positive or negative direction depending on a success rate of the reproducing process which is carried out again.

20. (Original) The storage apparatus as claimed in claim 12, further comprising:

a setting section which sets an optimum offset depending on at least one of an object of a seek process and a target address on the recording medium.

21. (New) The tracking control method as claimed in claim 1, wherein said step (a) generates the state where the waveform interference from an adjacent track is easily generated by writing data on the adjacent track with a recording power greater than an optimum recording power with which data is recorded on the track at the tracking target position.

22. (New) The storage apparatus as claimed in claim 12, wherein said measuring section generates the state where the waveform interference from an adjacent track is easily generated by writing data on the adjacent track with a recording power greater than an optimum recording power with which data is recorded on the track at the tracking target position.